



Superior Clamping and Gripping



MAGNOS E compact

The economical Introduction to  
Magnetic Clamping Technology!

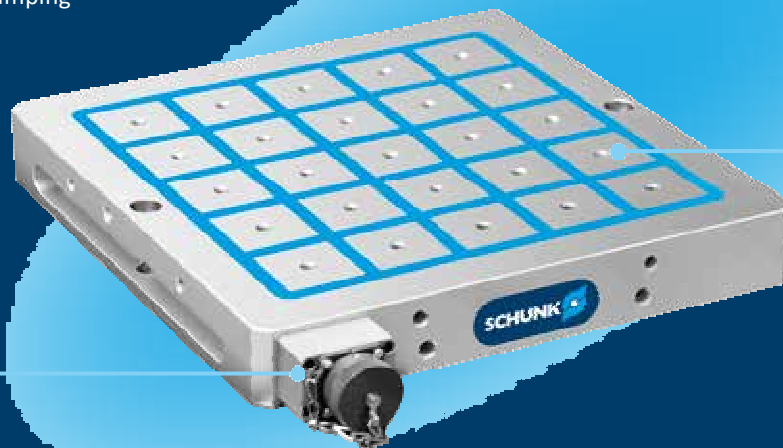
## E compact for your Added Value!

Everything you need, at a small low Price.

MAGNOS square pole technology is the ideal clamping solution for powerful cutting processes. It can be used with any system and offers energy-efficient, actionable clamping for all common milling, grinding, and machining centers.

### The benefits at a glance

- **The economical introduction to magnetic clamping technology** with MAGNOS E compact
- **5-sided workpiece machining in one set-up**  
Higher accuracy by setting up once and at best accessibility of the machine spindle
- **No deformation** due to gentle workpiece clamping
- **Shortest possible set-up times** and a resulting increase in productivity
- **Clamping within a few seconds**
- **Increase in tool life and process capability**



### MAGNOS control unit KSS-EC 01

The control unit KSS-EC 01 can be used to control a magnetic chuck. The magnetic chucks only require a short pulse for clamping and releasing. This is achieved via simple actuation on the hand remote control.



### MAGNOS control unit KEH-EC 04

The control unit KEH-EC 04 can be used to control up to four magnetic chucks. Using the connection box facilitates easy installation. The magnetic chucks only require a short pulse for clamping and releasing. This is achieved via actuation on the hand remote control.

On the control unit, the individual magnetic chucks can be selected using the switches. In addition, the KEH-EC 04 offers the option of machine integration via the PLC connection.



### Pole extension - for any workpiece geometry

Fixed and movable pole extensions ensure that the magnetic chuck locating surface can be perfectly adjusted to the workpiece, thus ensuring deformation-free clamping. Using the pole extensions fully enables the workpiece to be machined from 5 sides in just one set-up.

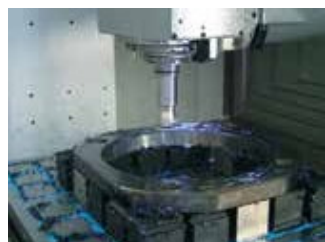


## MAGNOS E compact in Comparison

| Characteristics                                    | MAGNOS E compact       | MAGNOS standard chucks |
|--|------------------------|------------------------|
| Patented status display for clamping status        | no                     | yes                    |
| Holding force                                      | max. 3,925 kN per pole | max. 3,925 kN per pole |
| Height of the magnetic chuck                       | 52 mm                  | 66 mm                  |
| Mechanical rigidity/stability                      | ++                     | +++                    |
| Grindability of the magnetic chuck                 | 3 mm                   | 5 mm                   |
| Accessory pole extensions                          | +                      | +++                    |
| VERO-S interface                                   | no                     | yes                    |
| Modular control unit                               | no                     | yes                    |
| Easy replacement of spare parts                    | +                      | +++                    |
| Plastic coating on the cable                       | no                     | yes                    |
| Optional: fixed cable connection                   | no                     | yes                    |
| Optional: drill holes suitable for machine table   | no                     | yes                    |
| Optional: connection block in a different position | no                     | yes                    |
| Expansion technology                               | no                     | yes                    |

+++ excellent   ++ very good   + good

## Equipped by SCHUNK



### CNC Universal milling machine

**Task:** Machining hardened rings made of X37 CrMoV5-1

**Solution:** Magnetic chucks of type MFR-A1 1000 x 600 x 66 mm, pole size 50 x 50 mm

**Advantage:** Reduction in production times by approx. 60%, vibration-free clamping



### CNC Universal milling machine

**Task:** Face milling steel plates ST 52

**Solution:** 2 magnetic chucks of type MFR-A1 750 x 480 x 66 mm pole size 50 x 50 mm. Additional 60 pole extensions 50 x 50 mm, controlled in parallel

**Advantage:** Plane parallelism < 0.02 mm along a length of 1.2 m due to vibration-free clamping. Optimum 5-side accessibility and savings on set-up time of 30%



### Vertical machining center

**Task:** Machining large plates

**Solution:** 4 magnetic chucks of type MFR-A1 800 x 500 x 66 mm, pole size 50 x 50 mm

**Advantage:** Grinding operations no longer necessary due to flatness of < 0.05 mm over the length of 1.4 m



### Horizontal machining center

**Task:** Machining a medium sized cast angle (GG25)

**Solution:** Magnetic chucks of type MFR-A2 600 x 400 x 85 mm, pole size 50 x 50 mm

**Advantage:** 4-sided machining in one clamping, optimum access to the workpiece

## Magnetic chucks

| Designation           | ID       | L<br>[mm] | B<br>[mm] | H<br>[mm] | Number of<br>poles | max. total<br>holding force<br>[kN] |
|-----------------------|----------|-----------|-----------|-----------|--------------------|-------------------------------------|
| MFR-EC-A1-050 370X370 | 46000431 | 370       | 370       | 52        | 25                 | 98                                  |
| MFR-EC-A1-050 580X370 | 46000430 | 580       | 370       | 52        | 40                 | 157                                 |
| MFR-EC-A1-050 800X370 | 46000432 | 800       | 370       | 52        | 50                 | 196                                 |
| MFR-EC-A1-050 800X450 | 46000433 | 800       | 450       | 52        | 60                 | 236                                 |
| MFR-EC-A1-050 980X580 | 1341759  | 980       | 580       | 52        | 84                 | 330                                 |



## Control unit for a magnetic chuck

| Designation         | ID      | L<br>[mm] | W<br>[mm] | H<br>[mm] | Connection |
|---------------------|---------|-----------|-----------|-----------|------------|
| KSS-EC-01 400V/50Hz | 0422610 | 300       | 150       | 77        | 1x 4-PIN   |

- No PLC connection



## Control unit for four magnetic chucks with connection box

| Designation         | ID      | L<br>[mm] | W<br>[mm] | H<br>[mm] | Connection |
|---------------------|---------|-----------|-----------|-----------|------------|
| KEH-EC-04 400V/50Hz | 1342947 | 400       | 300       | 120       | 4x 4-PIN   |

- with connection box for installation
- PLC connection possible
- Selecting each magnetic clamping plate to control unit possible



## Pole extensions

| Designation  | ID      | Description   |
|--------------|---------|---|
| PVF-EC 50-32 | 1342945 | Fixed pole extension, 50 x 50 x 32 mm with a through bore and screw M8  |
| PVB-EC 50-32 | 1342946 | Flexible pole extension, 52 x 45 x 32 mm with a through bore and screw M8, stroke 5 mm to compensate for workpiece unevenness |



Different magnetic chuck dimensions with status display and KEH plus control unit and accessories can be found in our standard magnetic clamping technology catalog.



*J. Lehmann*

Jens Lehmann, German goalkeeper legend,  
SCHUNK brand ambassador since 2012 for  
safe, precise gripping and holding.  
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